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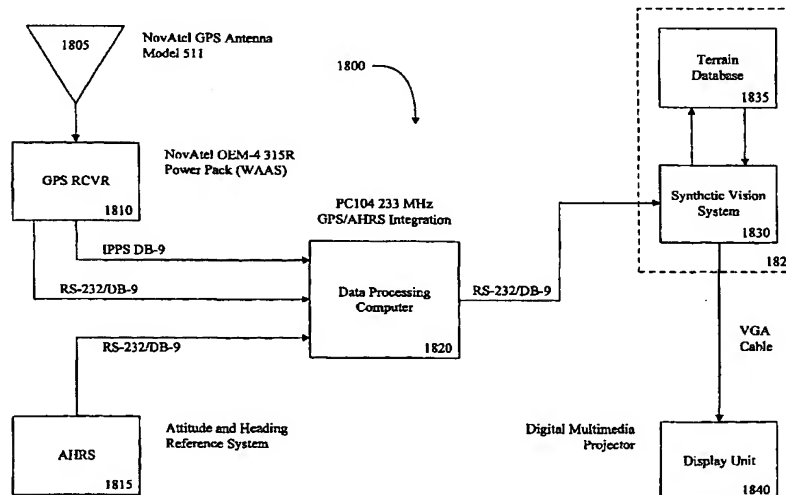
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G01S 13/02, G01C 23/00
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- (75) Inventors/Applicants (for US only): BURCH, Douglas [US/US]; 612 O'Neal Street, Belpre, OH 45714 (US).
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MULTI-VIEW HEAD-UP SYNTHETIC VISION DISPLAY SYSTEM



(57) Abstract: Systems and methods for providing an enhanced head up display to an aircraft pilot are disclosed. According to a first aspect of the present invention, a system for increasing pilot situational awareness is disclosed. The system (1800) includes a navigational component (1805, 1810, 1815) that determines one or more of an aircraft location and attitude. The system (1800) also includes a scene generator (1835) that produces one or more virtual images of the space into which the aircraft is flying based, at least in part, on the aircraft location and/or attitude. The system (1800) further includes one or more head up displays (1840) that display the one or more virtual images to facilitate increasing pilot situational awareness. Other systems and methods for providing an enhanced head up display are also disclosed.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/32306

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G09G 5/00; G01S 13/02; G01C 23/00

US CL : 345/7, 8; 701/3, 4, 14;

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 345/7, 8; 701/3, 4, 14; 348/115; 349/11;

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,654,890 A (NICOSIA et al) 05 August 1997 (05.08.1997), figure 1, column 3, lines 35 through column 4, line 29, column 9, lines 48-63, and column 10, lines 13-16.	1 and 2
X	US 6,381,519 B1 (SNYDER) 30 April 2002 (30.04.2002), figures 1 and 3, abstract, column 3, lines 28-64, column 4, line 32 through column 5, line 7.	1-3

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

PCT/US03/32306

Continuation of B. FIELDS SEARCHED Item 3:

EAST; Data Bases: USPAT, US-PGPUB, DERWENT, EPO, JPO and IBM TDB; Search Terms: head up display, determining aircraft location or aircraft position and aircraft attitude, image generator, navigation, virtual image, awareness, a plurality of head up displays.